California
Electric
Transportation
Coalition

October 14, 2005

The Honorable John L. Geesman
Commissioner and Presiding Member
Integrated Energy Policy Report Committee
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

The Honorable James D. Boyd
Commissioner and Member
Integrated Energy Policy Report Committee
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

David L. Modisette
Executive Director

Julee Malinowski-Ball
Legislative Director

1015 K Street Suite 200
Sacramento CA 95814

916-551-1943
FAX-441-3549
CalETC@ix.netcom.com

Dear Commissioners Geesman and Boyd:

The California Electric Transportation Coalition (CalETC) is pleased to provide these comments on the Committee Draft Report of the 2005 Integrated Energy Policy Report, September, 2005. We will be focusing our comments on Chapter 2, Transportation Fuels.

1. CalETC wants to first commend the Committee and the staff for Chapter 2 on Transportation Fuels. The Recommendations in particular are strong and comprehensive.

2. We recommend that the Introduction be augmented with language describing the interrelationship between our public policy problems in transportation, air pollution, greenhouse gas emissions, petroleum dependence, and energy supply diversity and security. For example:

a. Transportation is the largest sector of **energy consumption** in California, accounting for about 50% of total energy use.
b. Transportation is the largest source of **GHG emissions** in California, accounting for 42% of total GHG emissions.
c. Transportation is the largest source of **air pollution** in California, accounting for over 65% of smog forming pollutants.
d. Transportation has the **least fuel diversity** of any sector in California; it is more than 95% dependent on one fuel: petroleum.
e. And as a Nation, we have let ourselves get into a position were we are dependent upon **foreign sources and foreign governments** to supply 60% of the petroleum we consume.

3. In the section on Demand for Gasoline and Diesel Fuel (page 6) we note that the language points out that the CEC forecast only covers on-road demand, and does not include off-road demand or non-road demand, which is significant. Reducing off-road and non-road petroleum consumption would obviously benefit all Californians and the on-road sector as well. We recommend that the IEPR recommend that the CEC broaden its forecasting capabilities to include fuel demand in the off-road and non-road sectors.

4. In the section on The Urgent Need to Diversify Transportation Fuels (page 10) we agree that "the state should pursue all reasonable non-petroleum fuel and technology options". We also agree with the sentence that follows this one, although we would recommend a small addition (indicated by the underlined words), "Because of the urgent need to diversify fuels, those options that can be used in existing engine and fueling systems, or technology additions to existing engine and fueling systems which are achievable in the near-term and can be produced with in-state resources should be given high priority."

5. We recommend that the description and discussion of Table 1 (page 10) be clarified to indicate that Table 1 does not contain all of the fuel and technology options examined, nor are the recommended options at the back of the Chapter limited to these options. For example, Truck Stop Electrification (TSE) was not examined using the analysis in Table 1, nor is it listed in the Table. But TSE has been demonstrated to have large benefits, while at the same time saving truckers money. So TSE is one of the recommendations listed at the end of the Chapter. Table 1 simply illustrates one way of evaluating some of the options.

The discussion about Table 1 should also make clear that it's purpose is not to define "winners" (with positive Direct Net Benefit) and "losers" (with negative Direct Net Benefit). There are many criteria which policy makers can and do use to determine which fuel and technology options to work on. Table 1 evaluates some of the criteria, but not all. And the results of Table 1 are highly dependent on a large number of assumptions which vary widely for a variety of reasons. For these reasons Table 1 should be seen as a tool, but not as a conclusion.

We continue to be concerned about what assumptions have been used in the Table 1 analysis. Although the results for plug-in hybrids are positive, our reaction is that the numbers displayed in Table 1 should be even larger. Also, was the impact on government revenues removed from this version of the analysis? Footnote "g" on this issue is still unclear to us. We would like to work with staff to better understand these results.

6. There are a few problems with the brief section on Electricity (page 15). First, the last paragraph in this section indicates that non-road electric equipment (forklifts, airport ground support, etc) "unfortunately has no credit assigned under current state air emission reduction regulations or incentives". This is not true (with some exceptions). For example, airports in Southern California are required to replace a percentage of their airport ground support equipment with electric equipment. And electric forklifts, tow tractors, sweepers, turf trucks may be used to comply with new in-use fleet average standards proposed by the California Air Resources Board.

And all of this equipment, plus TSE, electric standby truck refrigeration units, and marine "cold ironing" is eligible for incentives under the Carl Moyer Air Quality Standards Attainment Incentive Program. Of course, all new golf carts are mandated by the ARB to be electric. And individual air quality management districts have their own incentive programs which encourage electric equipment, such as the extremely popular electric lawnmower incentive programs.

The only instances where some non-road electric equipment is not included in air quality regulatory structures is for some emission standards for non-road engines, where the ARB does not allow the production of electric equipment to be included in an engine manufacturer's fleet average. Of course, ARB does allow this for on-road vehicles, and CalETC believes that there would be significant air quality benefits, plus reduction in GHG and petroleum if ARB were to correct this and allow electric equipment to be an option for manufacturers to use in compliance with fleet average emission standards for new non-road engines and equipment.

The second flaw in the Electricity section in the Transportation Chapter is that it does not inform the reader about the fact that there is already a significant quantity of electrically powered vehicles and equipment in California. Nor does it indicate that electricity is an extremely clean and energy efficient transportation fuel, and that this is largely due to the fact that California has an extremely clean and diverse generation mix.

So CalETC would recommend the addition of a couple of new paragraphs to the beginning of the Electricity section on page 15, that might read something like this:

Electricity

In 2002 there were approximately 300,000 units of electric transportation and goods movement equipment in California.[1] Most of this is comprised of industrial vehicles, such as forklifts, industrial tugs, tow tractors, industrial sweepers & scrubbers, burden and personnel carriers. It also includes electric-standby truck refrigeration units, golf carts, and neighborhood electric vehicles. All of these have gasoline or diesel counterparts, so the choice of electric equipment displaces petroleum use, as well as reducing emissions of criteria pollutants and greenhouse gases (GHG).

The use of electricity as a transportation fuel, as a replacement for gasoline or diesel, produces very large reductions in emissions due to California's clean and diverse mix of generation resources as well as the inherent energy efficiency of electric drivetrains. For example, the California Air Resources Board has estimated that electric vehicles produce only about 6% of the air pollution of the cleanest new internal combustion cars available today, Advanced Technology PZEV hybrids.[2]

The number of electric transportation and goods movement technologies is expected to triple by 2020 (to 900,000-1,000,000 units). This growth is not only due to natural market growth, but also

[1] TIAX Update to 2002 Arthur D. Little Electric Vehicle Market Assessment, Draft Final Letter Memo to the California Electric Transportation Coalition, TIAX,LLC, June 30, 2005.
[2] 2000 ZEV Program Biennial Review, California Air Resources Board staff, August 7, 2000.

to known regulatory requirements and financial incentive programs that are encouraging the use of electric technologies because of their inherent emissions benefits.
This expected growth of electric technologies by 2020 is projected to save 301-458 million gallons of gasoline equivalent per year. This will also reduce GHG emissions by 3.2-4.8 million tons per year CO2 equivalent.

Much larger reductions in petroleum, GHG and criteria pollutant emissions are achievable with incentive programs and/or regulatory requirements designed to encourage the displacement of petroleum with electric technologies. Achievable petroleum displacement by 2020 is estimated to be 1.7-2.2 ***billion*** gallons of gasoline equivalent per year. Achievable GHG reduction by that same time is 18-23 million tons per year CO2 equivalent.

(Insert existing paragraph 1 on page 15 here)

There is increasing attention on grid-connect, or "plug-in", hybrids as an on-road electric-drive technology option which can bridge-the-gap between today's hybrids and the zero-emission vehicles of the future. Plug-in hybrids are like today's hybrids, but they have a larger battery pack and the optional capability to plug-in to grid-supplied electricity from a standard 110 volt outlet when available (like overnight in the garage). Plug-in hybrids have the capability to provide 20-60 miles of all-electric battery-only (and zero-emission) range, before the internal combustion engine comes on to supply the remainder of the needed driving range. In this way, plug-in hybrids address the limitations that all-electric vehicles have in terms of limited range and high battery cost. And because plug-in hybrids have significant zero-emission range they can produce significant reduction in petroleum, criteria pollutants, and GHG emissions – much more than the very efficient hybrid vehicles available today.

(Insert existing paragraph 2 on page 15 here)

(Delete existing paragraph 3 on page 15 here)

7. Under the section about Hydrogen on pages 16 and 17, we believe it would be informative and helpful to note that the Governor's own Hydrogen Highway Blueprint Plan says that the development of "bridging technologies" which assist the development of fuel-cell technologies is both beneficial and important. And that electric-drive technologies are bridging technologies, including hybrid, plug-in hybrid, and pure electric vehicles.

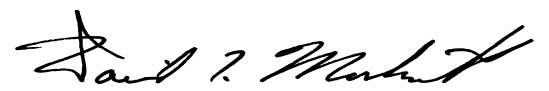
8. The discussion on Truck Anti-Idling on page 19 is not quite correct. Existing ARB regulations limit idling of all heavy-duty trucks, except "sleeper berth" trucks, to 5 minutes. And on October 20th, the ARB will consider a regulation to limit the idling of the sleeper berth trucks to 5 minutes beginning January 1, 2008. The discussion of truck stop electrification is good.

9. The Recommendations section (beginning on page 28) is very good, specific, and comprehensive. For the March 31st, 2006 report to the Governor it will have to be even more detailed. We only have a few comments on specific recommendations; to make it easier to identify the specific recommendations here, them I numbered them in the document from #1 on page 28 through #29 on page 31.

a. On #1, we recommend that you be a little more specific and say that any state agency programs, incentives, or regulatory requirements in one of these policy areas (reduce petroleum fuel use, increase diversity and security, reduce emissions of air pollution and GHG) should in the (near) future take into consideration the need to make improvements in the other areas.
b. On #2, we recommend that the Renewable Diesel Fuel Standard include a limited credit mechanism which would allow increased use of renewable electricity (above what is required in other areas, such as the RPS) which displaces diesel fuel use to count towards the Standard.
c. On #4, the Renewable Gasoline Fuel Standard, we make the same recommendation as in #4. This may be a way to provide strong incentives for the commercialization of plug-in hybrids which use renewable electricity.
d. On #9, Moyer Program, this should not only include a criterion for petroleum reduction, but reduction in GHG (consistent with recommendation 1 also).
e. On #10, "pollutant portfolio", we agree, but would also add GHG and petroleum reduction (consistent with recommendation 1).
f. On #12, re-word "open a proceeding at the CPUC", to "open a dialog between the CEC, CPUC, ARB, local air quality management districts, utilities, and other stakeholders". Just last year the CPUC (with support of virtually all parties) decided to consider utility low emission vehicle programs within individual utility GRCs, rather than as a separate stand-alone proceeding. The GRC approach is much more efficient. But there is a need to initiate high-level discussions with the CPUC and these other agencies on this important issue. We would recommend that the CEC or CPUC initiate a series of meetings with the parties identified above (and in the statutes) to identify areas of opportunity and interest, as well as issues of concern.
g. On #14, information programs, we recommend this include information on alternative fuels and alternative fuel vehicles.
h. On #16, this is excellent. On small point, in (2) replace the word "diesel" with "petroleum" or "diesel and gasoline".
i. On #17, this is an excellent idea and we want to work with you to implement this recommendation. However, if there are barriers to using these funding sources you may wan to add the phrase "or other sources" to the recommendation.

Thank you for the opportunity to submit these comments and recommendations. If you have any questions or need additional information please do not hesitate to contact me. We look forward to working with you on these important issues.

Sincerely,



DAVID L. MODISETTE
Executive Director